



## Mental incapacitation makes pilot react later, miss information, take poor decisions and crash more often

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# Mental incapacitation makes pilots **react later, miss information, take poor decisions** and **crash more often\***

*Mental incapacitation in aviation: a scoping review*

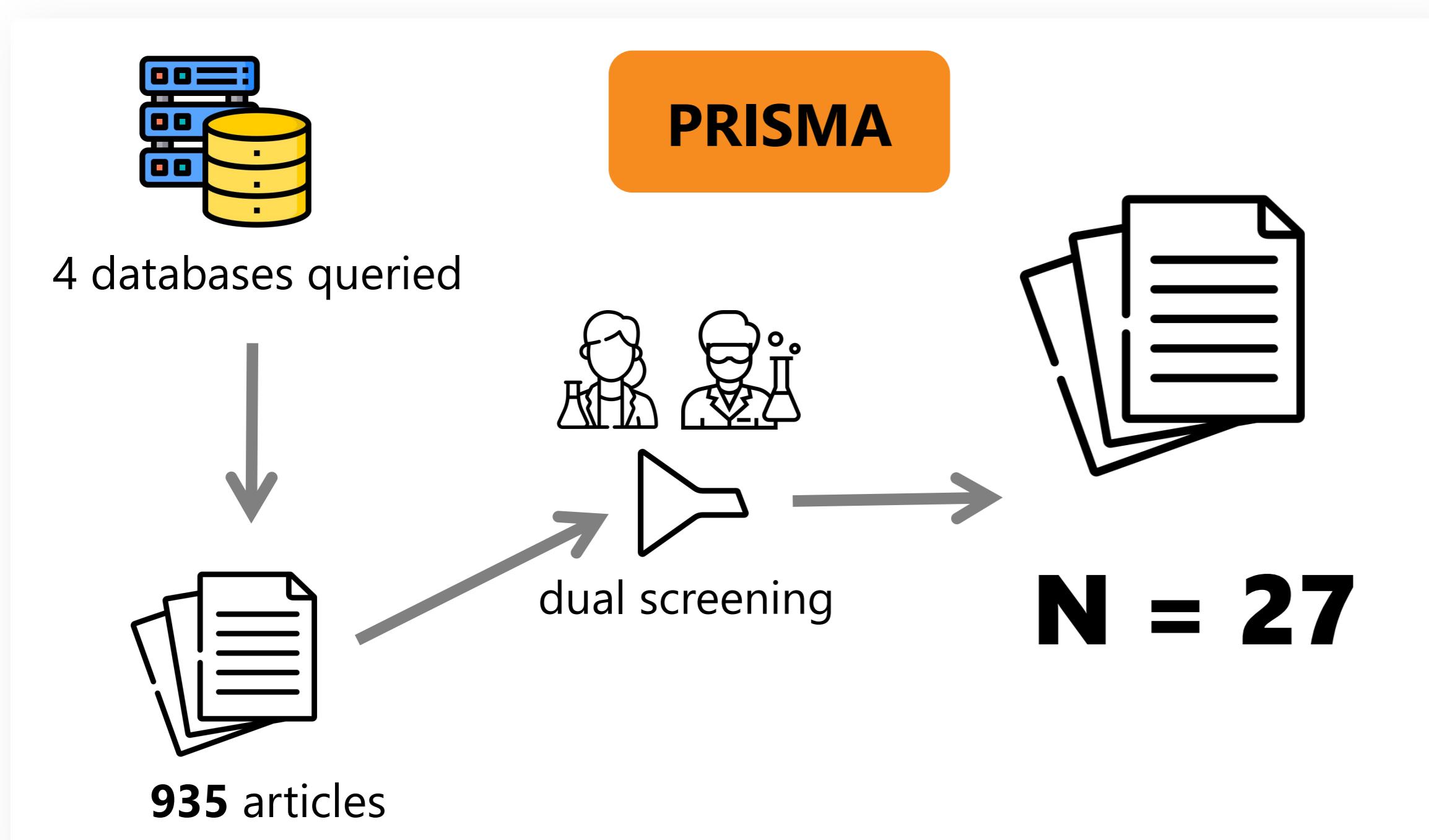
## Background:

Mental incapacitation may be induced by acute stress, surprise, startle, cognitive overload or mental fatigue in the cockpit and sometimes results in cognitive «freeze», accidents or incidents. There is no systematic literature review about mental incapacitation in pilots.

## Method

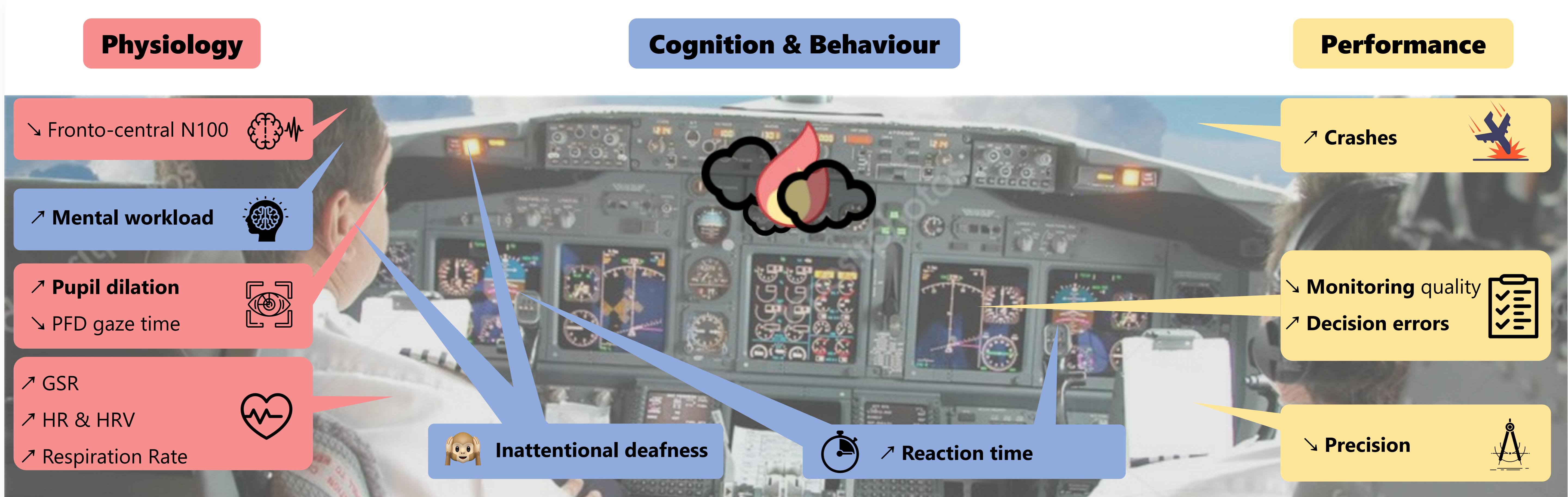
Sytematic literature review

## Typical experiment



- 21 participants (3% ♀)  
• Total = 546 pilots  
• Age: 34.9yo ± 8.12yo  
• Flight experience: 4539h ± 4758h  
• 70% in flight simulator  
• 81% use surprising event  
• engine failure / stall  
• automation failure
- Approach & landing  
Take-off  
Flight data  
Eye-tracking  
ECG, GSR, EEG  
Behaviour  
Questionnaires (workload)

## Review results



## Perspectives:

The great variability in objectives, methods and results in the literature invite to increase research effort on induction, detection and consequences of Mental Incapacitation.



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\*Scan the QR code to access the poster and references

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